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Scientific and Technical Journal

VOLUME 10 NUMBER 2



Introduction

WHAT STAR ANNUAL INDEXES ARE

This Annual Index is an edited consolidation of the indexes to the individual issues of *Scientific and Technical Aerospace Reports (STAR)* for the calendar year 1978 (Volume 16 Numbers 1 through 24). For the convenience of the user, it is divided into two parts, each bound separately. Part I contains the Subject Index. Part II contains the Personal Author Index, Corporate Source Index, Contract Number Index, and Report/Accession Number Index. The Annual Index supersedes the semimonthly and semiannual indexes previously issued during 1978.

Each entry in this index includes a group of identifying numbers in the following form: 18 p2359 N78-27159. The first two digits (18) identify the issue in which the document was announced. The "p" and the four digits that follow (2359) refer to the page number, in the designated issue, on which the abstract of the document appears. The next group of numbers (N78-27159) is the NASA Accession Number, a unique identification number assigned by NASA to each document that was acquired, indexed, and announced in *STAR* during the year.

In addition to these identifying numbers each entry in the Subject Index contains a title or title and title extension. Each entry in the Personal Author and Corporate Source Indexes contains the title of the document.

At the beginning of each index in this cumulation, a typical listing is illustrated with each of its elements identified to assist the reader in using the different types of index entries.

HOW TO USE THE SUBJECT INDEX

Subject terms in this cumulative index are arranged alphabetically, and are supplemented with cross-references which are intended to serve as directions that will enable the user to modify, enlarge, or narrow his search in accordance with his specific interests. The subject headings have been selected from the latest revision of the *NASA Thesaurus*. Two types of cross-references are used:

1. Use (U) references direct the user to alternate headings under which material on the subject may be found. For example:

COLUMBIUM

U NIOBIUM

ANNULAR JETS

U ANNULAR FLOW

U JET FLOW

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:

EMISSION
NT ELECTRON EMISSION
NT NEUTRON EMISSION
NT THERMAL EMISSION

Finally, a searcher should use the titles and title extensions in the index to narrow further his quest for particular items. This is because subject terms can readily refer to more than one class of document. For example:

CATHODES

Cesium plasma cathodes as sources of high intensity electron beams.

Cathode material testing in electrochemical half cells.

illustrates a case where two references on different topics are listed under the same subject term.

HOW TO USE THE CORPORATE SOURCE INDEX

The corporate source index entries are abridged versions of the corporate sources used in the abstract-section citations in the individual issue supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

PRINCETON UNIV., N.J. DEPT. OF CHEMICAL ENGINEERING.
(Corporate source at citation)
PRINCETON UNIV., N.J.
(Corporate source index entry)

HOW TO USE THE PERSONAL AUTHOR INDEX

All personal authors identified in the abstract-section citations in the individual *STAR* issues appear in this index. Differences in transliteration schemes may require multiple searching of the index for variants of an author's name. For example:

EMELIANOV, M. D.
YEMELIANOV, M. D.

HOW TO USE THE CONTRACT NUMBER INDEX

All contract numbers that are identified in the abstract-section citations in the individual *STAR* issues appear in this index. Changes by agencies in the style in which contract numbers are presented may require multiple searching for variants. For example:

AF 33(615)-67-C-1758
F33615-67-C-1758

HOW TO USE THE REPORT/ACCESSION NUMBER INDEX

All report numbers that have been assigned by the corporate source, monitoring activity, or cataloging activity appear in this index. Variations in initial input may result in different report number series. For example:

TP-924
ONERA-TP-924

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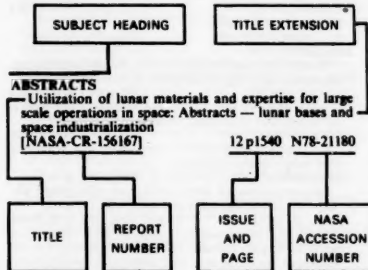
AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in the *STAR* issues covered in this index is found in the Introduction to the most currently issued semimonthly issue.

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SCIENTIFIC AND TECHNICAL AEROSPACE REPORTS VOLUME 16 NUMBERS 1-24

TYPICAL SUBJECT INDEX LISTING



The subject heading is the key to the subject content of the document. Titles, issues, page numbers, report numbers, and accession numbers of pertinent documents are provided under each subject heading. When the title is insufficiently descriptive of the document content, a title extension has been added, separated from the title by three hyphens. The report number helps to indicate the type of document cited (e.g., NASA report, translation, NASA contractor report). The issue and page identify the STAR issue in which the document was announced and the page number on which the citation appears. The accession number denotes the number by which the citation is identified on that page. The titles are arranged under each subject heading in ascending accession number order. The subject headings have been selected from the latest revision of the *NASA Thesaurus* (NASA SP-7050).

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[AD-A045489] 04 p0448 N78-13186

Simulated lightning test on the Navy Airborne Light Optical Fiber Technology [ALOFT] A-7 aircraft
[AD-A046370] 06 p0702 N78-15030

A-7 ALOFT economic analysis and EMI-EMP test results
07 p0946 N78-16816

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[AD-A053701] 19 p2594 N78-28888

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[DI.R-IB-152-77/09] 02 p0150 N78-11057

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07 p0937 N78-16745

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NT ALPHA PARTICLES

NT ANIONS

NT ANTIPROTONS

NT ARGON PLASMA

NT BETA PARTICLES

NT CATIONS

NT CESIUM PLASMA

NT COLD PLASMAS

NT COLLISIONAL PLASMAS

NT COLLISIONLESS PLASMAS

NT CONDUCTION ELECTRONS

NT COSMIC PLASMA

NT DENSE PLASMAS

NT DEUTERIUM PLASMA

NT DEUTERONS

NT ELECTRON PLASMA

NT ELECTRONS

NT ENERGETIC PARTICLES

NT FREE ELECTRONS

NT HEAVY NUCLEI

NT HELIUM PLASMA

NT HIGH ENERGY ELECTRONS

NT HIGH TEMPERATURE PLASMAS

NT HOT ELECTRONS

NT HYDROGEN PLASMA

NT LASER PLASMAS

NT MAGNETICALLY TRAPPED PARTICLES

NT METAL IONS

NT NEGATONS

NT NONEQUILIBRIUM PLASMAS

NT NONUNIFORM PLASMAS

NT NUCLEI [NUCLEAR PHYSICS]

NT PHOTOELECTRONS

NT PLASMA CLOUDS

NT PLASMA LAYERS

NT PLASMA SHEATHS

NT PLASMA SLABS

NT PLASMAS [PHYSICS]

NT POLARONS

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NT RELATIVISTIC PLASMAS

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NT CYCLIC HYDROCARBONS
NT DIENES
NT DIPHENYL COMPOUNDS
NT ETHANE
NT ETHYLENE
NT HEPTANES
NT KEROGEN
NT LIQUEFIED NATURAL GAS
NT METHANE
NT METHYLENE

HYDROCARBONS

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NT AMIDES
NT AMMONIA
NT AMMONIUM NITRATES
NT ATROPINE
NT AZIDES [INORGANIC]
NT BORON NITRIDES
NT CAFFEINE
NT CYANO COMPOUNDS
NT HYDROCYANIC ACID
NT IMIDES
NT INORGANIC NITRATES
NT LIQUID AMMONIA
NT NITRATE ESTERS
NT NITRATES
NT NITRIC ACID
NT NITRIC OXIDE
NT NITRIDES
NT NITRILES
NT NITRO COMPOUNDS

NT NITROAMINES
NT NITROGEN DIOXIDE
NT NITROGEN FLUORIDES
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NT NITROGEN POLYMERS
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NT NITROGLYCERIN
NT NITROSAMINE
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NT NITROSYLS
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U ALKYLATION

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NT INTERPLANETARY GAS

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RASERS

U MASERS

RATE METERS

U MEASURING INSTRUMENTS

RATES (PER TIME)

NT ACCELERATION (PHYSICS)

NT ACOUSTIC VELOCITY

NT AIRSPEED

NT ANGULAR ACCELERATION

NT ANGULAR VELOCITY

NT ARRHYTHMIA

NT BRADYCARDIA

NT BURNING RATE

NT COLLISION PARAMETERS

NT COLLISION RATES

NT CRITICAL VELOCITY

NT CURRENT DENSITY

NT DECAY RATES

NT DECELERATION

NT DRIFT RATE

NT ELECTRON FLUX DENSITY

NT EVAPORATION RATE

NT FLOW VELOCITY

NT FLUX (RATE)

NT FLUX DENSITY

NT GROUND SPEED

NT GROUP VELOCITY

NT HEART RATE

NT HEAT FLUX

NT HIGH ACCELERATION

NT HIGH GRAVITY ENVIRONMENTS

NT HIGH SPEED

NT HYPERSONIC SPEED

NT ILLUMINANCE

NT IMPACT ACCELERATION

NT ION PRODUCTION RATES

NT LANDING SPEED

NT LOADING RATE

NT LOW SPEED

NT LUMINANCE

NT LUMINOUS INTENSITY

NT MAGNETIC FLUX

NT MASS FLOW RATE

NT NEUTRON FLUX DENSITY

NT PARTICLE ACCELERATION

NT PARTICLE FLUX DENSITY

NT PHASE VELOCITY

NT PHOTON DENSITY

NT PLASMA ACCELERATION

NT PROPAGATION VELOCITY

NT PROTON FLUX DENSITY

NT PULSE RATE

NT RADIANCE

NT RADIANT FLUX DENSITY

NT RECOMBINATION COEFFICIENT

NT RELATIVISTIC VELOCITY

NT RESPIRATORY RATE

NT SIGNAL FADING RATE

NT SOLAR CONSTANT

NT SOLAR FLUX

NT SOLAR FLUX DENSITY

NT SOLAR VELOCITY

NT SOLAR WIND VELOCITY

NT SOUND INTENSITY

NT SPIN REDUCTION

NT STRAIN RATE

NT SUBSONIC SPEED

NT SUPERSONIC SPEEDS

NT SYSTOLE

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NT ASPECT RATIO

NT FUEL-AIR RATIO

NT HIGH ASPECT RATIO

NT INDEXES (RATIOS)

NT LAVAL NUMBER

NT LIFT DRAG RATIO

NT LOW ASPECT RATIO

NT MACH NUMBER

NT MASS RATIOS

NT PRANDTL NUMBER

NT RAYLEIGH NUMBER

NT REYNOLDS NUMBER

NT RICHARDSON NUMBER

NT SCALE (RATIO)

NT SIGNAL TO NOISE RATIOS

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NT THICKNESS RATIO

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